

Outbreak Management Program

Overview

The NCPHI Outbreak Management Program (OMP) focuses on the informatics and technology needs of public health workers throughout all phases of response to a disease outbreak. Information needs highlighted by public health events in recent years and anticipated for future events demonstrate that information systems are critical for outbreak investigation, management, delivery of appropriate interventions, and analysis of response.

OMP recognizes outreach and collaboration with stakeholders, user workgroups, and Communities of Practice as critical elements to success. The program includes these forms of partnership in short and long term plans to enhance interoperability and continue building public health capacity to investigate, intervene, manage, and evaluate responses to disease outbreaks and other events.

Purpose

To help states lacking resources to purchase or develop applications and those with specific technology gaps, CDC provides a series of applications to support disease outbreak and response management. These applications include Epi Info™, Outbreak Management System (OMS), and Countermeasure and Response Administration (CRA). Each supports different levels of outbreaks, and each has relative strengths that can be applied to a given situation. CDC also uses these applications to support the national response to disease outbreaks and other public health events.

Current Activities

Epi Info™

Epi Info™ is a public domain software package designed for the global community of public health practitioners and researchers. Epi Info™ users can rapidly develop questionnaires and forms, customize the data entry process, and enter and analyze data. Epidemiologic statistics, tables, graphs, and maps are produced with simple commands.

Outbreak Management System (OMS)

OMS assists public health workers in the management of outbreaks by enabling the capture of data on demographics, case investigations, laboratory results, countermeasures, exposures and relationships between persons, animals, other organisms, events, travel, vehicles, objects, organizations, and locations. The system allows for case follow up, contact tracing, and data import, export, and analysis.

Countermeasure and Response Administration (CRA)

The CRA system is a Web-based tool public health partners may use to manage countermeasure and response administration activities within their jurisdictions. In addition, for selected events such as the National Smallpox Vaccination Program and the National Pandemic Influenza Plan, CRA supports CDC's cross-jurisdictional reporting



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needs by providing flexible methods for accepting data from other systems or by extracting summarized data. CRA has its origins in the Pre-event Vaccination System (PVS) that was implemented nationwide to track and monitor the administration of smallpox vaccines as part of the National Smallpox Preparedness Program. Building from this success and in collaboration with state and local partners, CDC expanded the system capabilities and made it available for use on the state and local levels. CRA's advanced functionality helps ensure that individuals receive recommended countermeasures, and it then tracks and manages information on vaccinations, prophylaxes, treatments, and quarantine.

Outbreak Management Interoperability Project

In June 2009, CDC initiated the Outbreak Management Interoperability Project to address the challenges of cross-jurisdictional aggregation and analysis of data that grow exponentially when an event becomes regional or national in nature. The goal is to develop interoperability across CRA, OMS, and Epi Info™ by leveraging the strengths of each system and providing a scalable tool suite that uses standardized vocabulary, exchange formats, and transport mechanisms. Outbreak management interoperability will reduce redundancy of effort and increase the consistency and accuracy of data used to support decision making during a public health event.

Major Initiatives

Epi Info™

In December 2008, NCPHI released an open source version of Epi Info™ to enable external developers and information technology professions to contribute enhancements and features to the product. Epi Info™ Community Edition is the open source version of the popular Epi Info™ Version 3.5.1 suite of tools (available from the Epi Info™ website.) The rewrite project is supported by an active community of open source developers and enthusiasts. Those interested in joining the community can find more information at <http://cms.myeppi.info>.

CRA

In June 2009, CRA Version 1.9 was released, offering:

- Group dispensing support
- Data exchange enhancements
- Improved support for offline deployments
- Analysis, visualization, and reporting enhancements
- User-defined field enhancements

OMS

OMS Version 1.3 is deployed among state and local jurisdictions in many different deployment scenarios.

For more information, please visit <http://www.cdc.gov/ncphi>